

PATENT
Reply under 37 CFR 1.116
EXPEDITED PROCEDURE
Group 2859

REMARKS

Claims 1-17 are pending and rejected in this application. Claims 1, 5, 10 and 11 are amended hereby. Claims 12-15 are canceled hereby.

It is further submitted that the requested amendments to the claims, submitted after the Office Action designated as Final, should be entered, in that the amendment will place all remaining claims in condition for allowance. Further, the requested amendments to the claims simplify the issues for a potential appeal by reducing the number of claims under consideration and clarifying the claimed structure.

Responsive to the Examiner's objections to claims 5 and 8-11 at page 2 of the Office Action, Applicants have amended claims 5, 8, 10 and 11 keeping in mind the comments offered by the Examiner. Applicants submit that claims 5 and 8-11 are in allowable form.

Responsive to the rejection of claims 1-11, 16 and 17 under 35 U.S.C. § 103(a) as being obvious by U.S. Patent No. 6,306,258 (Lange et al.) in view of U.S. Patent No. 5,562,027 (Moore), Applicants have amended claim 1 and submit that claims 1-11, 16 and 17 are now in condition for allowance.

Lange et al. '258 discloses air press 20 positioned about upper forming fabric 22 and lower forming fabric 24 and web 26 positioned therebetween (column 3, lines 50-52). Air press 20 includes pressure box 28 positioned above upper forming fabric 22 and vacuum box 30 positioned below lower forming fabric 24 (column 3, lines 52-55). Pressure box 28 includes rigidly mounted frame 32 and opensided box 34 mounted to frame 35 (column 4, lines 29-32). The loading of ceramic shoes 53, 54 and the movement of inner box 34 is controlled by pairs of opposed air tubes (column 4, lines 65-67). Upper air tubes 62, 64 move baffles 36, 38 downwardly by expanding between upwardly facing surfaces 66, 68 of short legs 55, 56 (column 4, line 67 through column 5, line 2). Lower air tubes 65, 67 move baffles 36, 38 upwardly away

from forming fabrics 22, 24 by expanding between portions 74, 76 of short legs 55, 56 of baffles 36, 38 (column 5, lines 2-6). The upper air tubes 62, 64 and lower air tubes 65, 67 are connected to a source of compressed air (not shown) and a controller (not shown) with which baffles 36, 38 are pressed against upper forming fabric 22 (column 5, lines 7-11). In an alternative embodiment air press 120 employs vacuum roll 124 (column 6, lines 4-13).

Moore '027 discloses system 1 including roll 2 having pressure sensors thereon 4, lies in a press nip configuration with another roll 6, in Fig. 1 roll 6 is shown as the support roll. Fabric 8 carrying a web 10 of fibrous matter, lies between the two rolls, 2 and 6, causing web 10 to be compressed therebetween. In electrical communication with sensors 4 are associated electronics 24, which aid in converting the sensor output to a pressure value. A roll-mounted multiplexer 12 is accessed by computer 18, to cycle through sensors 4 to obtain output signals indicative of the pressure sensed. Multiplexer 12 is further in electrical communication with bidirectional transmitter 14 which can comprise a telemetry transmitter, slip rings or a rotary transformer. Transmitter 14 transmits the signals from multiplexer 12 to signal conditioner 16 which in turn, delivers conditioned signals representing the pressure sensed, to computer 18. (Column 3, line 66 through column 4, line 15). An optional control system 22, can be connected to computer 18 and signal conditioner 16. Control system 22 serves to correct any sensed pressure irregularities by increasing or decreasing the force being applied by the roll. Control system 22 has internal microprocessor 26 for receiving user inputs in response to interpretation of pressure sensed, or for receiving direct pressure readings from the signal conditioner. Microprocessor 26 upon receipt of such signals initiates corrective measures to make adjustments to the journal forces applied between rolls 2 and 6, or to the zone pressures or crown settings when the system is used as part of a controlled crown feedback system. (Column 4, lines 54-65) Additionally, given the fact that

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rolls are often comprised of multiple layers, sensors 4 can be embedded within roll cover 5 as shown in Fig. 3B (column 5, line 66 through column 6, line1).

In contrast, claim 1, as amended, recites in part: "a sensor mounted in the press apparatus for producing a signal indicative of the pressure on the paper web as the paper web is passed through the gap adjacent said sensor . . .". Applicants submit that such an invention is neither taught, disclosed nor suggested by Lange et. al. '258 and Moore '027 or any of the other cited references, alone or in combination, and has distinct advantages thereover.

Lange et al '258 teaches an air press and a controller. Moore '027 teaches sensors mounted on a roll surface above the web or in a roll cover above the web. However, Lange et al '258 and Moore '027, separately or in combination, fail to disclose, teach or suggest a sensor mounted in the press apparatus for producing a signal indicative of the pressure on the paper web as the paper web is passed through the gap adjacent the sensor. Applicants respectfully submit that even if the prior art device performs all the functions recited in the present invention claims, the prior art cannot anticipate the claim if there is any structural difference (MPEP 2114), the structural difference being a sensor mounted in the press apparatus. It is not obvious to combine the sensors of Moore '027 with the ceramic shoes 53, 54 of Lange et al '258, the ceramic shoes are structurally different than the roll of Moore '027 and are providing a seal for the vacuum box.

*2 combined
sensors w/
Roll &
shifted to
shoes.*

Applicants' invention has an advantage over the cited references in that the system thereby controls the cross-machine uniformity of the sealing or pressing nip of the press apparatus commensurate with optimal water removal and maintenance of the desired, uniform paper web caliper at a given speed. Another advantage of the present invention is to provide an air press which maximizes the pressing operation without compromising the speed of production.

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For all of the foregoing reasons, Applicants submit that claim 1, and claims 2-11 depending therefrom, are now in condition for allowance, which is hereby respectfully requested.

In further contrast, claim 16, recites in part: "at least one sensor attached to at least one of the leading or trailing arms (of the press apparatus) . . .". Applicants submit that such an invention is neither taught, disclosed nor suggested by Lange et. al. '258 and Moore '027 or any of the other cited references, alone or in combination, and has distinct advantages thereover.

Lange et al '258 teaches an air press and a controller. Moore '027 teaches sensors mounted on a roll surface above the web or in a roll cover above the web. However, Lange et al '258 and Moore '027, separately or in combination, fail to disclose, teach or suggest at least one sensor attached to at least one of the leading or trailing arms (of the press apparatus). Applicants respectfully submit that even if the prior art device performs all the functions recited in the present invention claims, the prior art cannot anticipate the claim if there is any structural difference (MPEP 2114), the structural difference being a sensor mounted in one of the leading or trailing arms (of the press apparatus). It is not obvious to combine the sensors of Moore '027 with the ceramic shoes 53, 54 of Lange et al '258, the ceramic shoes are structurally different than the roll of Moore '027 and are providing a seal for the vacuum box.

Applicants' invention has an advantage over the cited references in that the system thereby controls the cross-machine uniformity of the sealing or pressing nip of the press apparatus commensurate with optimal water removal and maintenance of the desired, uniform paper web caliper at a given speed. Another advantage of the present invention is to provide an air press which maximizes the pressing operation without compromising the speed of production.

For all of the foregoing reasons, Applicants submit that claim 16, and claim 17 depending therefrom, are now in condition for allowance, which is hereby respectfully requested.

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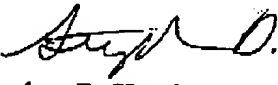
Responsive to the rejection of claims 12-15 under 35 U.S.C. § 103(a) as being obvious by
U.S Patent No. 5,562,027 (Moore), Applicants have canceled claims 12-15.

For the foregoing reasons, Applicants submit that the pending claims are definite and do particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Moreover, Applicants submit that no combination of the cited references teaches, discloses or suggests the subject matter of the amended claims. The pending claims are therefore in condition for allowance, and Applicants respectfully request withdrawal of all rejections and allowance of the claims.

In the event Applicants have overlooked the need for an extension of time, an additional extension of time, payment of fee, or additional payment of fee, Applicants hereby conditionally petition therefor and authorizes that any charges be made to Deposit Account No. 20-0095, TAYLOR & AUST, P.C.

Should any question concerning any of the foregoing arise, the Examiner is invited to telephone the undersigned at (260) 897-3400.

Respectfully submitted,


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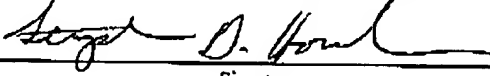
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Signature

May 5, 2003
Date

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